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FILE 'HOME' ENTERED AT 16:35:05 ON 23 DEC 2002

=> FIL MEDLINE BIOSIS EMBASE CA SCISEARCH
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                       ENTRY    SESSION
FULL ESTIMATED COST                                     0.21       0.21

FILE 'MEDLINE' ENTERED AT 16:35:17 ON 23 DEC 2002

FILE 'BIOSIS' ENTERED AT 16:35:17 ON 23 DEC 2002
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FILE 'SCISEARCH' ENTERED AT 16:35:17 ON 23 DEC 2002
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=> s (ribonucleotide (n) protein) or rnp
L1         11621 (RIBONUCLEOTIDE (N) PROTEIN) OR RNP

=> s l1 and rnp
L2         11556 L1 AND RNP

=> s l3 and s100
L3 NOT FOUND
The L-number entered could not be found.  To see the definition
of L-numbers, enter DISPLAY HISTORY at an arrow prompt (=>).

=> s l2 and s100
L3            47 L2 AND S100

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4            16 DUP REM L3 (31 DUPLICATES REMOVED)

=> s kiesewetter, S?/au; kuhn, E?/au;s (koch (n) pelster), B?/au; s Brunner, H?/au
L5            40 KIESEWETTER, S?/AU
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KUHN, IS NOT A RECOGNIZED COMMAND
COMMAND STACK INTERRUPTED.  ENTER "DISPLAY HISTORY"
TO SEE WHICH COMMANDS WERE EXECUTED.

The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).

=> s kiesewetter, S?/au;s kuhn, E?/au;s (koch (n) pelster), B?/au; s Brunner, H?/au
L8          40 KIESEWETTER, S?/AU


L7        2558 KUHN, E?/AU


MISSING OPERATOR PELSTER), B?/AU
COMMAND STACK INTERRUPTED.  ENTER "DISPLAY HISTORY"
TO SEE WHICH COMMANDS WERE EXECUTED.

The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s kiesewetter, S?/au;s kuhn, E?/au;s koch, B?/au; s Brunner, H?/au
L8          40 KIESEWETTER, S?/AU


L9        2558 KUHN, E?/AU


L10       2130 KOCH, B?/AU


L11       7476 BRUNNER, H?/AU

=> s (l8 or l9 or l10 or l11) and l2
L12          7 (L8 OR L9 OR L10 OR L11) AND L2

=> d his

     (FILE 'HOME' ENTERED AT 16:35:05 ON 23 DEC 2002)

     FILE 'MEDLINE, BIOSIS, EMBASE, CA, SCISEARCH' ENTERED AT 16:35:17 ON 23
     DEC 2002
L1        11621 S (RIBONUCLEOTIDE (N) PROTEIN) OR (RNP)
L2        11556 S L1 AND RNP
L3           47 S L2 AND S100
L4           16 DUP REM L3 (31 DUPLICATES REMOVED)
L5           40 S KIESEWETTER, S?/AU
L6           40 S KIESEWETTER, S?/AU
L7         2558 S KUHN, E?/AU
L8           40 S KIESEWETTER, S?/AU
L9         2558 S KUHN, E?/AU
L10        2130 S KOCH, B?/AU
L11        7476 S BRUNNER, H?/AU
L12           7 S (L8 OR L9 OR L10 OR L11) AND L2

=> s l4 or l12
L13          23 L4 OR L12

=> dup rem l13
PROCESSING COMPLETED FOR L13
```

L14 22 DUP PEM L13 (1 DUPLICATE REMOVED)

=> d l14 1-22 ibib abs

L14 ANSWER 1 OF 22 MEDLINE
ACCESSION NUMBER: 20013402210 MEDLINE
DOCUMENT NUMBER: 21282946 PubMed ID: 11278198
TITLE: The heterogeneous nuclear ribonucleoproteins I and K interact with a subset of the ro ribonucleoprotein-associated Y RNAs in vitro and in vivo.
AUTHOR: Fabini G; Raijmakers R; Hayer S; Fouraux M A; Pruijn G J; Steiner G
CORPORATE SOURCE: Institute of Medical Biochemistry, University of Vienna, the Vienna Biocenter, Dr. Bohr-Gasse 9, A-1030 Vienna, Austria.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Jun 8) 276 (23) 20711-8.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200107
ENTRY DATE: Entered STN: 20010716
Last Updated on STN: 20011119
Entered Medline: 20010711

AB The hY RNAs are a group of four small cytoplasmic RNAs of unknown function that are stably associated with at least two proteins, Ro60 and La, to form Ro ribonucleoprotein complexes. Here we show that the heterogeneous nuclear ribonucleoproteins (hnRNP) I and K are able to associate with a subset of hY RNAs in vitro and demonstrate these interactions to occur also in vivo in a yeast three-hybrid system. Experiments performed in vitro and in vivo with deletion mutants of hY1 RNA revealed its pyrimidine-rich central loop to be involved in interactions with both hnRNP I and K and clearly showed their binding sites to be different from the Ro60 binding site. Both hY1 and hY3 RNAs coprecipitated with hnRNP I in immunoprecipitation experiments performed with HeLa **S100** extracts and cell extracts from COS-1 cells transiently transfected with VSV-G-tagged hnRNP-I, respectively. Furthermore, both anti-Ro60 and anti-La antibodies coprecipitated hnRNP I, whereas coprecipitation of hnRNP K was not observed. Taken together, these data strongly suggest that hnRNP I is a stable component of a subpopulation of Ro **RNPs**, whereas hnRNP K may be transiently bound or interact only with (rare) Y RNAs that are devoid of Ro60 and La. Given that functions related to translation regulation have been assigned to both proteins and also to La, our findings may provide novel clues toward understanding the role of Y RNAs and their respective **RNP** complexes.

L14 ANSWER 2 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:256750 BIOSIS
DOCUMENT NUMBER: PREV200100256750
TITLE: Prion proteins (PrP) that (Cu,Zn)-metalloregulated bind RNA are related to transfer factors of delayed-type hypersensitivity (TF-DTH : Mechanisms of transfer of bioinformation and PrP infectivity.
AUTHOR(S): Wassler, Josef H. (1); Logemann, Enno
CORPORATE SOURCE: (1) ABIONS Applied Research Institute, D-61231, Bad Nauheim Germany
SOURCE: FASEB Journal, (March 8, 2001) Vol. 15, No. 5, pp. A938. print.
Meeting Info.: Annual Meeting of the Federation of American Societies for Experimental Biology on Experimental Biology

2001 Orlando, Florida, USA March 31-April 04, 2001
ISSN: 0892-6638.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English
AB PrP roles as physiologically expressed cellular proteins are unknown; no plausible mechanisms are yet to explain the problem of proteinaceous PrP infectivity of transmissible spongiform encephalopathies, i.e. spread of PrP from peripheral sites to CNS. We showed PrP (Biol.Chem. 381:S234,2000; FASEB J. 14:A794,2000; Biophys.J. 78:190A,2000) having conserved (Cu/Zn)-metalloregulated nucleic acid (RNA)-binding sites in H3H/(ExxxH) motifs, binding single-stranded nucleic acids and adopting helix structures upon RNA-binding. This may relate to the fact that PrP preparations highly enriched for scrapie infectivity contain oligonucleotides at a concentration of one molecule per ID50 (Prusiner, Proc.Natl.Acad.Sci.USA 95:13363-13383,1998). These features suggest PrP being related to (Cu,Zn,Ca,Mg)-metalloregulated **S100**-EF-hand proteins binding Cu ion-prestructured, modified and edited (oxidant-sensitive) RNA to form CuRNP. Thus, PrP potentials forming non-viral, metalloregulated endogenous CuRNP were considered in relation to essential features of proteinaceous TF-DTH in virus- and antibody-independent adaptive cell-mediated immunity (CMI). Antigen-specific transfer of DTH are well known basic mechanisms in CMI to tumors and infections, e.g. fungi, mycobacteria, tuberculosis. Some endogenous structures, nature of bioinformation and action mechanisms in TF-DTH were unraveled recently (Wissler et al. Biol.Chem. 380:S208,1999). These leads in TF-DTH are metalloregulated **RNP** built up of metal-affine **S100**-EF-hand proteins and (some wobble-type 5'G-(I)n3') oligonucleotides, RNA, dsRNA complexed by Cu ions: Conclusions suggest PrP infectivity without foreign genomes may follow mechanisms of TF-DTH and be disorders of functions of PrP associated to (Cu/Zn)-metalloregulated binding and biofunctions of endogenous RNA. Biounavailability of (Cu,Zn,Ca,Mg) metal ions in non-physiological diets (meat and bone meal) is considered a critical factor in endemic scrapie by disturbing physiological Cu-RN-PrP interaction equilibria.

L14 ANSWER 3 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:181458 BIOSIS
DOCUMENT NUMBER: PREV200100181458
TITLE: Metal-containing ribonucleotide polypeptides.
AUTHOR(S): Wissler, Josef (1); Ligemann, Enno; **Kiesewetter, Stefan**; Heilmeyer, Ludwig
CORPORATE SOURCE: (1) Bad Nauheim Germany
ASSIGNEE: Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung e.V., Germany
PATENT INFORMATION: US 6087113 July 11, 2000
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (July 11, 2000) Vol. 1236, No. 2, pp. No Pagination. e-file.
ISSN: 0098-1133.
DOCUMENT TYPE: Patent
LANGUAGE: English
AB The invention relates to bioactive ribonucleo polypeptides (**RNP**) containing copper, zinc or calcium. These are non-mitogenic morphogens for blood vessels of a defined primary structure for intercellular communication with genetic information. Zn/Ca/Cu-**RNP** can enzymatically hydrolyse nucleinic acids in a regulated manner (regulated nuclease activity) and be modulated and regulated via Zn/Ca/Cu-metal ion contents as "molecular switches" in mutual bioactivity. The compounds selectively stimulate the directional growth of the morphogenesis of blood vessels in vivo and in vitro and lead to neovascularisation of tissues. The invention further relates to a method of producing and obtaining the

RNP as well as its utilisation, and medicines.

L14 ANSWER 4 OF 22 MEDLINE
ACCESSION NUMBER: 2000247180 MEDLINE
DOCUMENT NUMBER: 20247180 PubMed ID: 10785401
TITLE: Analysis of the molecular composition of Ro ribonucleoprotein complexes. Identification of novel Y RNA-binding proteins.
AUTHOR: Fabini G; Rutjes S A; Zimmermann C; Pruijn G J; Steiner G
CORPORATE SOURCE: Institute of Biochemistry, University of Vienna, Austria.
SOURCE: EUROPEAN JOURNAL OF BIOCHEMISTRY, (2000 May) 267 (9) 2778-89.
Journal code: 0107600. ISSN: 0014-2956.
PUB. COUNTRY: GERMANY: Germany, Federal Republic of
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200006
ENTRY DATE: Entered STN: 20000622
Last Updated on STN: 20000622
Entered Medline: 20000615

Ab Human Ro ribonucleoproteins (**RNPs**) are composed of one of the four small Y RNAs and at least two proteins, Ro60 and La; association of additional proteins including the Ro52 protein and calreticulin has been suggested, but clear-cut evidence is still lacking. Partial purification of Ro **RNPs** from HeLa **S100** extracts allowed characterization of several subpopulations of Ro **RNPs** with estimated molecular masses of between 150 and 550 kDa. The majority of these complexes contained Ro60 and La, whereas only a small proportion of Ro52 appeared to be associated with Ro **RNPs**. To identify novel Y RNA-associated proteins in vitro, binding of cytoplasmic proteins to biotinylated Y RNAs was investigated. In these reconstitution experiments, several proteins with estimated molecular masses of 80, 68, 65, 62, 60 and 53 kDa, the latter two being immunologically distinct from Ro60 and Ro52, respectively, appeared to bind specifically to Y RNAs. Furthermore, autoantibodies to these proteins were found in sera from patients with systemic lupus erythematosus. The proteins bound preferentially to Y1 and Y3 RNA but, with the exception of the 53-kDa protein, only weakly to Y4 RNA and not at all to Y5 RNA. Coprecipitation of the 80, 68, 65, and 53-kDa proteins by antibodies to Ro60 and La was observed, suggesting that at least a proportion of the novel proteins may reside on the same particles as La and/or Ro60. Finally, the binding sites for these proteins on Y1 RNA were clearly distinct from the Ro60-binding site involving a portion of the large central loop 2, which was found to be indispensable for binding of the 80, 68, 65 and 53-kDa proteins, as well as the stem 3-loop 3 and stem 2-loop 1 regions. Interestingly, truncation of the La-binding site resulted in decreased binding of the novel proteins (but not of Ro60), indicating La to be required for efficient association. Taken together, these results suggest the existence of further subpopulations of Ro **RNPs** or Y **RNPs**, consistent with the heterogeneous characteristics observed for these particles in the biochemical fractionation experiments.

L14 ANSWER 5 OF 22 CA COPYRIGHT 2003 ACS
ACCESSION NUMBER: 133:248018 CA
TITLE: Identification of differentially expressed genes in cardiac hypertrophy by analysis of expressed sequence tags
AUTHOR(S): Hwang, David M.; Dempsey, Adam A.; Lee, Cheuk-Yu; Liew, Choong-Chin
CORPORATE SOURCE: Cardiac Gene Unit, Department of Laboratory Medicine and Pathobiology, Centre for Cardiovascular Research,

Toronto Hospital, University of Toronto, Toronto, ON, M5G 1L5, Can.
SOURCE: Genomics (2000), 66(1), 1-14
CODEN: GNMCEP; ISSN: 0888-7543
PUBLISHER: Academic Press
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Cardiac hypertrophy is an adaptive response to chronic hemodynamic overload. We employed a whole-genome approach using expressed sequence tags (ESTs) to characterize gene transcription and identify new genes overexpressed in cardiac hypertrophy. Anal. of general transcription patterns revealed a proportional increase in transcripts related to cell/organism defense and a decrease in transcripts related to cell structure and motility in hypertrophic hearts compared to normal hearts. Detailed comparison of individual gene expression identified 64 genes potentially overexpressed in hypertrophy, of 232 candidate genes derived from a set of 77,692 cardiac ESTs, including 47,856 ESTs generated in our lab. Of these, 29 were good candidates ($P < 0.0002$; and 35 were weaker candidates ($P < 0.005$). RT-PCR of a no. of these candidate genes demonstrated correspondence of EST-based predictions of gene expression with in vitro levels. Consistent with an organ under various stresses, up to one-half of the good candidates predicted to exhibit differential expression were genes potentially involved in stress response. Analyses of general transcription patterns and of single-gene expression levels were also suggestive of increased protein synthesis in the hypertrophic myocardium. Overall, these results depict a scenario compatible with current understanding of cardiac hypertrophy. However, the identification of several genes not previously known to exhibit increased expression in cardiac hypertrophy (e.g., prostaglandin D synthases; CD59 antigen) also suggests a no. of new avenues for further investigation. These data demonstrate the utility of genome-based resources for investigating questions of cardiovascular biol. and medicine. (c) 2000 Academic Press.
REFERENCE COUNT: 84 THERE ARE 84 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L14 ANSWER 6 OF 22 CA COPYRIGHT 2002 ACS
ACCESSION NUMBER: 130:279860 CA
TITLE: Angiotropin: a metal-binding ribonucleoprotein acting as non-mitogenic homeostatic and angiogenic agent
INVENTOR(S): **Kiesewetter, Stefan; Kuhn, Eckehard**; Koch-pelster, Brigitte; **Brunner, Herwig**
PATENT ASSIGNEE(S): Fraunhofer-Gesellschaft zur Foerderung der Angewandten Forschung e.V., Germany
SOURCE: Ger., 16 pp.
CODEN: GWXXAW
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 19811047	C1	19990415	DE 1998-19811047	19980313
CA 2322795	AA	19990923	CA 1998-2322795	19981130
WO 9947561	A1	19990923	WO 1998-EP7722	19981130
W: CA, IL, JP, US				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
EP 1062237	A1	20001227	EP 1998-961234	19981130
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
JP 2002506882	T2	20020305	JP 2000-536752	19981130

PRIORITY APPLN. INFO.: DE 1998-19811047 A 19980313
WO 1998-EP7722 W 19981130

AB A metal-binding ribonucleoprotein (angiotropin) that acts as a non-mitogenic homeostatic agent and that plays a role in angiogenesis and controlling the direction of growth of blood vessels is characterized. The protein is an S-100-like protein that binds copper, zinc, and calcium. In culture, its effect on confluent capillary endothelial cells is to change their shape and organization without inducing mitosis. In vivo, it has specific chemotropic effects on blood vessels that can lead to neovascularization of tissues. The **RNP** is manufd. by leukocytes and inflamed tissue.

L14 ANSWER 7 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1999:322810 BIOSIS
DOCUMENT NUMBER: PREV199900322810
TITLE: Transfer factors of delayed-type hypersensitivity (TF-DTH): Structure of copper-**RNP** cytokines (ribokines) and cellular and enzymic biofunctions of **S100**-EF-hand protein and oligonucleotide (RNA, dsDNA) units.
AUTHOR(S): Wissler, J. H. (1); Logemann, E.
CORPORATE SOURCE: (1) IBT Biotechnology, APOGNS Applied Research, D-61231, Bad Nauheim Germany
SOURCE: FASEB Journal, (April 23, 1999) Vol. 13, No. 7, pp. A1472. Meeting Info.: Annual Meeting of the American Societies for Experimental Biology on Biochemistry and Molecular Biology 99 San Francisco, California, USA May 16-20, 1999 American Societies for Experimental Biology . ISSN: 0892-6638.
DOCUMENT TYPE: Conference
LANGUAGE: English

L14 ANSWER 8 OF 22 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 1998:906814 SCISEARCH
THE GENUINE ARTICLE: 137GL
TITLE: Angiotropin ribokine: Natural and recombinant nonmitogenic leukocytic copper-**RNP** endothelial cell-vascularizing angio-morphogens and cellular and enzymatic activities of their **S100** -EF-hand-protein and RNA units.
AUTHOR: Wissler J H (Reprint); Logemann E
CORPORATE SOURCE: BIOTECHNOL APOGNS APPL RES, D-61231 BAD NAUHEIM, GERMANY; UNIV FREIBURG, D-79111 FREIBURG, GERMANY
COUNTRY OF AUTHOR: GERMANY
SOURCE: MOLECULAR BIOLOGY OF THE CELL, (NOV 1998) Vol. 9, Supp. [S], pp. 467-467. Publisher: AMER SOC CELL BIOLOGY, PUBL OFFICE, 9650 ROCKVILLE PIKE, BETHESDA, MD 20814. ISSN: 1059-1524.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE
LANGUAGE: English
REFERENCE COUNT: 0

L14 ANSWER 9 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1999:174318 BIOSIS
DOCUMENT NUMBER: PREV199900174318
TITLE: Angiotropin ribokine: Natural and recombinant non-mitogenic leukocytic copper-**RNP** endothelial cell-vascularizing angio-morphogens and cellular and enzymatic activities of their **S100** -EF-hand-protein and RNA units.
AUTHOR(S): Wissler, J. H.; Logemann, E.

CORPORATE SOURCE: Biotechnol. Arbeits Appl. Res., POB 1327, D-61231 Bad Nauheim, D-79111 Freiburg Germany
SOURCE: Molecular Biology of the Cell, (Nov., 1998) Vol. 9, No. SUPPL., pp. 71A.
Meeting Info.: 38th Annual Meeting of the American Society for Cell Biology San Francisco, California, USA December 12-16, 1998 American Society for Cell Biology . ISSN: 1059-1524.
DOCUMENT TYPE: Conference
LANGUAGE: English

L14 ANSWER 10 OF 22 MEDLINE
ACCESSION NUMBER: 97316827 MEDLINE
DOCUMENT NUMBER: 97316827 PubMed ID: 9174101
TITLE: Use of adenoviral VAI small RNA as a carrier for cytoplasmic delivery of ribozymes.
AUTHOR: Pirsel S; Buonomo S B; Michienzi A; Rozzoni I
CORPORATE SOURCE: Istituto Pasteur, Fondazione Cenci-Bolognetti, Dipartimento di Genetica e Biologia Molecolare, Universita La Sapienza, Roma, Italy.
SOURCE: RNA, (1997 Jun) 3 (6) 677-87.
Journal code: 9509184. ISSN: 1355-8382.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals; AIDS
ENTRY MONTH: 199706
ENTRY DATE: Entered STN: 19970709
Last Updated on STN: 19970709
Entered Medline: 19970624

AB The in vivo effectiveness of therapeutic RNAs, like antisense molecules and ribozymes, relies on several features: RNA molecules need to be expressed at high levels in the correct cellular compartment as stable and active molecules. The exploitation of "natural" small RNA coding genes as expressing cassettes gives high chances to fulfill these requirements. We have investigated the utilization of the adenoviral VAI RNA as a cytoplasmatic carrier for expressing ribozymes against HIV-1. The conserved 5' leader sequence of HIV was chosen as a target, because it is present in all the viral transcripts and is highly conserved. Hammerhead ribozymes were substituted to different portions of the VAI RNA and the resulting chimera were tested in the in vivo system of Xenopus laevis oocytes for their level of accumulation, cellular compartmentalization, and assembly in specific ribonucleoparticles containing the La antigen. Interesting differences in the activity of the different chimera were found in both in vitro cleavage assays and **S100** extracts of injected oocytes where the catalytic activity of the ribozymes in the **RNP** context can be analyzed.

L14 ANSWER 11 OF 22 MEDLINE
ACCESSION NUMBER: 97129078 MEDLINE
DOCUMENT NUMBER: 97129078 PubMed ID: 8973618
TITLE: RNA-labelled Ro and La ribonucleoprotein complexes reassembled in vitro; characterization by gel shift analysis.
AUTHOR: Granger D; Gendron M; Tremblay A; Chabot B; Menard H A; Boire G
CORPORATE SOURCE: Department of Medicine, Centre Universitaire de Sante de l'Estrie, Universite de Sherbrooke, Quebec, Canada.
SOURCE: CLINICAL AND EXPERIMENTAL IMMUNOLOGY, (1996 Dec) 106 (3) 493-503.
Journal code: 0057202. ISSN: 0009-9104.
PUB. COUNTRY: ENGLAND: United Kingdom

DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199701
ENTRY DATE: Entered STN: 19970219
Last Updated on STN: 19970219
Entered Medline: 19970121

AB Ro and La **RNP** complexes were reassembled from in vitro labelled hY5 RNA and HeLa cell extracts. These complexes were then visualized through retardation of migration of labelled hY5 RNA in non-denaturing polyacrylamide gels. Three major complexes (named A, B, and C) were formed when crude cellular extracts (**S100** fraction) were used. Using monospecific anti-60-kD Ro (Ro60) and anti-La antibodies to retard **RNPs** containing these antigens during migration in the gels, the three major complexes were shown to contain Ro60 (C), La (B), or both proteins (A). The specificity of RNA-protein interactions in the reassembled complexes was further demonstrated using two 3'-shortened hY5 RNA transcripts lacking the La binding site (hY5-Alu I RNA) and both the Ro60 and La-binding sites (hY5 Hha I RNA). hY5-Hha I RNA still formed a single, minor complex when incubated with **S100** extract, suggesting interaction with a yet undefined protein. In addition, we used the capacity of specific antibodies to retard the migration of the reassembled complexes to design a detection assay for anti-Ro and anti-La autoantibodies. Using 64 human sera, our assay was shown to approximate the specificity and sensitivity of an immunoprecipitation assay where 32P-labelled cell extracts are used as source of antigens. Our assay may be used to detect low levels of antibodies to conformational determinants of Ro60 and La proteins in human sera and antibody preparations.

L14 ANSWER 12 OF 22 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
ACCESSION NUMBER: 1995:286621 BIOSIS
DOCUMENT NUMBER: PREV199598300923
TITLE: Non-mitogenic leukocyte endothelial cell morphogens (ribokines): RNA primary structure of an extracellular **RNP** mediator for organoid capillary pattern formation.
AUTHOR(S): **Kiesewetter, S.**; Wissler, J. H.
CORPORATE SOURCE: Fraunhofer-Inst. Surface Technol. Biochem. Eng., Nobelstr. 12, D-70569 Stuttgart Germany
SOURCE: FASEB Journal, 1995 Vol. 9, No. 6, pp. A1369.
Meeting Info.: Annual Meeting of the American Society for Biochemistry and Molecular Biology San Francisco, California, USA May 21-25, 1995
ISSN: 0892-6638.
DOCUMENT TYPE: Conference
LANGUAGE: English

L14 ANSWER 13 OF 22 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1996:88512 BIOSIS
DOCUMENT NUMBER: PREV199698660656
TITLE: An extracellular **RNP** mediator (angiotropin) for organoid capillary pattern formation acts as an inhibitor of in vitro protein biosynthesis.
AUTHOR(S): **Kiesewetter, S.**; Wissler, J. H.
CORPORATE SOURCE: Abt. Technische Biochem. und Zellbiol., Fraunhofer-Inst. Grenzflaechen- und Bioverfahrenstechnik, Nobelstr. 12, D-70569 Stuttgart Germany
SOURCE: Biological Chemistry Hoppe-Seyler, (1995) Vol. 376, No. SPEC. SUPPL., pp. S115.
Meeting Info.: Fall Meeting of the Gesellschaft fuer Biologische Chemie Hannover, Germany September 11-13, 1995

ISSN: 0177-3593.
DOCUMENT TYPE: Conference
LANGUAGE: English

L14 ANSWER 14 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1994:482783 BIOSIS
DOCUMENT NUMBER: PREV199497495783
TITLE: Formation of pseudouridine in U5 small nuclear RNA.
AUTHOR(S): Patton, Jeffrey R.
CORPORATE SOURCE: Dep. Pathol., Sch. Med., University South Carolina, Columbia, SC 29208 USA
SOURCE: Biochemistry, (1994) Vol. 33, No. 34, pp. 10423-10427. ISSN: 0006-2960.
DOCUMENT TYPE: Article
LANGUAGE: English
AB The formation of pseudouridine (PSI) on U5 small nuclear RNA (U5 snRNA) was studied using an in vitro modification system. Labeled U5 RNA, synthesized in vitro and therefore unmodified, was incubated in reactions containing **S100** and/or nuclear extracts (NE) from HeLa cells, and the levels of PSI were determined. There are three PSI residues found in human U5 RNA, at positions 43, 46, and 53. Incubation of unmodified U5 RNA in reactions containing either **S100** or NE supports PSI formation at positions 43 and 46, which are found in a loop in the predicted secondary structure of U5 RNA. However, PSI formation at position 53, which is found in a stem, is dependent on the presence of NE during the incubation. The order of extract addition does not have a significant effect on the formation of PSI at position 53 as long as NE is present. The most efficient PSI formation was observed with a combination of **S100** and NE which allowed for efficient small nuclear ribonucleoprotein particle (snRNP) assembly and PSI formation. When 9S and 20S U5 sn **RNPs** were isolated by velocity sedimentation gradient centrifugation after incubation in the combined extracts, there was little difference in the PSI levels at any of the positions for the two distinct particles. Mutations in the U5 RNA sequence do affect PSI formation. U5 RNAs that have mutated Sm binding sites or are truncated prior to the Sm binding site have very low levels of PSI formation at positions 43 and 46 and no detectable PSI formation at position 53. A deletion of five nucleotides from 34 to 43 abolishes PSI formation at positions 43 and 46, but the modification of position 53 is unaffected.

L14 ANSWER 15 OF 22 MEDLINE
ACCESSION NUMBER: 93087499 MEDLINE
DOCUMENT NUMBER: 93087499 PubMed ID: 1454862
TITLE: General splicing factors SF2 and SC35 have equivalent activities in vitro, and both affect alternative 5' and 3' splice site selection.
AUTHOR: Fu X D; Mayeda A; Maniatis T; Krainer A R
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, Harvard University, Cambridge 02138.
CONTRACT NUMBER: CA13106 (NCI)
GM42231 (NIGMS)
GM42699 (NIGMS)
SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1992 Dec 1) 89 (23) 11224-8. Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199301
ENTRY DATE: Entered STN: 19930129
Last Updated on STN: 19990129

Entered Medline: 19930107

AB The human pre-mRNA splicing factors SF2 and SC35 have similar electrophoretic mobilities, and both of them contain an N-terminal ribonucleoprotein (**RNP**)-type RNA-recognition motif and a C-terminal arginine/serine-rich domain. However, the two proteins are encoded by different genes and display only 11% amino acid sequence identity. Here we report a systematic comparison of the splicing activities of recombinant SF2 and SC35. We find that either protein can reconstitute the splicing activity of **S100** extracts and of SC35-immunodepleted nuclear extracts. Previous studies revealed that SF2 influences alternative 5' splice site selection in vitro, by favoring proximal over distal 5' splice sites, and that the A1 protein of heterogeneous nuclear **RNP** counteracts this effect. We now show that SC35 has a similar effect on competing 5' splice sites and is also antagonized by A1 protein. In addition, we report that both SF2 and SC35 also favor the proximal site in a pre-mRNA containing duplicated 3' splice sites, but this effect is not modulated by A1. We conclude that SF2 and SC35 are distinct splicing factors, but they display indistinguishable splicing activities in vitro.

L14 ANSWER 16 OF 22 MEDLINE
ACCESSION NUMBER: 93021078 MEDLINE
DOCUMENT NUMBER: 93021078 PubMed ID: 1383219
TITLE: Ro ribonucleoprotein assembly in vitro. Identification of RNA-protein and protein-protein interactions.
AUTHOR: Slobbe R L; Pluk W; van Venrooij W J; Pruijn G J
CORPORATE SOURCE: Department of Biochemistry, University of Nijmegen, The Netherlands.
SOURCE: JOURNAL OF MOLECULAR BIOLOGY, (1992 Sep 20) 227 (2) 361-6.
Journal code: J3550HF. ISSN: 0022-2836.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199210
ENTRY DATE: Entered STN: 19930111
Last Updated on STN: 19980106
Entered Medline: 19921009

AB The human Y RNAs, small RNAs with an unknown function, are complexed with at least three proteins: the 60,000 Mr) Ro protein (Ro60), the 52,000 Mr) Ro protein (Ro52) and the La protein (La). In this study we examined the intermolecular interactions between the components of these so-called Ro ribonucleoprotein (Ro **RNP**) complexes. Incubation of 32P-labelled hY1 RNA in HeLa **S100** extract allows the reconstitution of Ro **RNP** complexes, which were analysed by immunoprecipitation with monospecific antisera. By immunodepletion of HeLa **S100** extracts for either Ro60, Ro52 or La, followed by supplementation with recombinant Ro60 or La, it was demonstrated that both Ro60 and La bind to hY1 RNA directly without being influenced by one of the other proteins. However, binding of Ro52 to hY1 RNA required the presence of Ro60, which strongly suggests that the association of Ro52 with Ro **RNPs** is mediated by protein-protein interactions between Ro60 and Ro52.

L14 ANSWER 17 OF 22 MEDLINE
ACCESSION NUMBER: 92049328 MEDLINE
DOCUMENT NUMBER: 92049328 PubMed ID: 1719377
TITLE: Pseudouridine modification of U5 RNA in ribonucleoprotein particles assembled in vitro.
COMMENT: Erratum in: Mol Cell Biol 1992 Feb;12(2):904
AUTHOR: Patton J R
CORPORATE SOURCE: Department of Pathology, School of Medicine, University of

South Carolina, Columbia 29208.
SOURCE: MOLECULAR AND CELLULAR BIOLOGY, (1991 Dec) 11 (12) 5998-6006.
Journal code: 8109087. ISSN: 0270-7306.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199112
ENTRY DATE: Entered STN: 19920124
Last Updated on STN: 19970203
Entered Medline: 19911224

AB The formation of pseudouridine (psi) in U5 RNA during ribonucleoprotein (**RNP**) assembly was investigated by using HeLa cell extracts. In vitro transcribed, unmodified U5 RNA assembled into an **RNP** particle with the same buoyant density and sedimentation velocity as did U5 small nuclear **RNP** from extracts. The greatest amount of psi modification was detected when a combination of **S100** and nuclear extracts was used for assembly. psi formation was inhibited when ATP and creatine phosphate or MgCl2 were not included in the assembly reaction, paralleling the inhibition of **RNP** particle formation. A time course of assembly and psi formation showed that psi modification lags behind **RNP** assembly and that at very early time points, Sm-reactive U5 small nuclear **RNPs** are not modified. Two of three psi modifications normally found in U5 RNA were present in RNA incubated in the extracts. Mutations in the form of deletions and truncations were made in the U5 sequence, and the effect of these mutations on psi formation was investigated. A mutation in the area of stem-loop I which contains the psi moieties or in the Sm binding sequence affected psi formation.

L14 ANSWER 18 OF 22 MEDLINE
ACCESSION NUMBER: 89315210 MEDLINE
DOCUMENT NUMBER: 89315210 PubMed ID: 2748838
TITLE: U2 small nuclear **RNP** assembly in vitro.
AUTHOR: Kleinschmidt A M; Patton J R; Pederson T
CORPORATE SOURCE: Cell Biology Group, Worcester Foundation for Experimental Biology, Shrewsbury, MA 01545.
CONTRACT NUMBER: GM-11399 (NIGMS)
GM-21995-14 (NIGMS)
SOURCE: NUCLEIC ACIDS RESEARCH, (1989 Jun 26) 17 (12) 4817-28.
Journal code: 0411011. ISSN: 0305-1048.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 198908
ENTRY DATE: Entered STN: 19900309
Last Updated on STN: 19970203
Entered Medline: 19890825

AB Incubation of a SP6-transcribed human U2 RNA precursor molecule in a HeLa cell **S100** fraction resulted in the formation of ribonucleoprotein complexes. In the presence of ATP, the particles that assembled had several properties of native U2 snRNP, including resistance to dissociation in Cs2SO4 gradients, their buoyant density, and pattern of digestion by micrococcal nuclease. These particles also reacted with Sm monoclonal antibody and a human autoantibody with specificity for the U2 snRNP-specific proteins A' and B", but not with antibodies for U1 snRNP-specific proteins. In contrast, the particles that formed in the absence of ATP did not have these properties. ATP analogs with non-hydrolyzable beta-gamma bonds did not substitute for ATP in U2 snRNP assembly. Additional experiments with a mutant U2 RNA confirmed that

nucleotides 154-167 of U2 RNA are required for binding of the U2 snRNP-specific proteins but not of the "Sm" core proteins. Pseudouridine formation, a major post-transcriptional modification of U2 RNA, was enhanced under assembly permissive conditions.

L14 ANSWER 19 OF 22 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 89:521606 SCISEARCH
THE GENUINE ARTICLE: AR644
TITLE: PREPARATION OF ISOGUANOSINE (CROTONOSIDE) AND ADENOSINE N-OXIDES AS NUCLEOSIDE HPLC-STANDARDS AND POSSIBLE CONSTITUENTS OF A MONOCYTIC METALLO-RIBONUCLEO-POLYPEPTIDE (CU-**RNP**) ANGIO-MORPHOGEN
AUTHOR: WISSLER J H (Reprint); **KIESEWETTER S**; LOGEMANN E; SPRINGL M; HEILMEYER L M G
CORPORATE SOURCE: UNIV STUTTGART, LEHRSTUHL BIOPROZ TECH, D-7000 STUTTGART 80, FED REP GER; UNIV BAYREUTH, INST RECHTS MED, D-8580 BAYREUTH, FED REP GER; RUHR UNIV BOCHUM, INST PHYSIOL CHEM, BIOCHEM SUPRAMOL SYST ABT, D-4630 BOCHUM 1, FED REP GER
COUNTRY OF AUTHOR: GERMANY
SOURCE: BIOLOGICAL CHEMISTRY HOPPE-SEYLER, (1989) Vol. 370, No. 9, pp. 975.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 6

L14 ANSWER 20 OF 22 SCISEARCH COPYRIGHT 2002 ISI (R)
ACCESSION NUMBER: 88:556704 SCISEARCH
THE GENUINE ARTICLE: Q4494
TITLE: MONOCYTIC ANGIO-MORPHOGEN - RNA AS CONSTITUENT OF A NEW ORGANOGENETIC TISSUE HORMONE REPRESENTING A COPPER-RIBONUCLEO-POLYPEPTIDE COMPLEX (CU-**RNP**)
AUTHOR: WISSLER J H (Reprint); **KIESEWETTER S**; LOGEMANN E; SPRINGL M; HEILMEYER L M G
CORPORATE SOURCE: RUHR UNIV BOCHUM, INST PHYSIOL CHEM, BIOCHEM SUPRAMOLEK SYST ABT, D-4630 BOCHUM, FED REP GER; UNIV BAYREUTH, LEHRSTUHL BIOCHEM, D-8580 BAYREUTH, FED REP GER
COUNTRY OF AUTHOR: GERMANY
SOURCE: BIOLOGICAL CHEMISTRY HOPPE-SEYLER, (1988) Vol. 369, No. 9, pp. 948-949.
DOCUMENT TYPE: Conference; Journal
FILE SEGMENT: LIFE
LANGUAGE: ENGLISH
REFERENCE COUNT: 4

L14 ANSWER 21 OF 22 MEDLINE
ACCESSION NUMBER: 88121127 MEDLINE
DOCUMENT NUMBER: 88121127 PubMed ID: 2963210
TITLE: Reconstitution of the U1 small nuclear ribonucleoprotein particle.
AUTHOR: Patton J R; Patterson R J; Pederson T
CORPORATE SOURCE: Cell Biology Group, Worcester Foundation for Experimental Biology, Shrewsbury, Massachusetts 01545.
CONTRACT NUMBER: GM-11349 (NIGMS)
GM-21595 (NIGMS)
SOURCE: MOLECULAR AND CELLULAR BIOLOGY, (1987 Nov) 7 (11) 4030-7. Journal code: 8109087. ISSN: 0270-7306.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals

ENTRY MONTH: 198803
ENTRY DATE: Entered STN: 19900308
Last Updated on STN: 19970203
Entered Medline: 19880308

AB Although the U1 small nuclear ribonucleoprotein particle (snRNP) was the first mRNA-splicing cofactor to be identified, the manner in which it functions in splicing is not precisely understood. Among the information required to understand how U1 snRNP participates in splicing, it will be necessary to know its structure. Here we describe the in vitro reconstitution of a particle that possesses the properties of native U1 snRNP. 32P-labeled U1 RNA was transcribed from an SP6 promoter-human U1 gene clone and incubated in a HeLa **S100** fraction. A U1 particle formed which displayed the same sedimentation coefficient (approximately 10S) and buoyant density (1.40 g/cm3) as native U1 snRNP. The latter value reflects the ability to withstand isopycnic banding in Cs2SO4 without prior fixation, a property shared by native U1 snRNP. The reconstituted U1 particle reacted with both the Sm and **RNP** monoclonal antibodies, showing that these two classes of snRNP proteins were present. Moreover, the reconstituted U1 snRNP particle was found to display the characteristic Mg2+ switch of nuclease sensitivity previously described for native U1 snRNP: an open, nuclease-sensitive conformation at a low Mg2+ concentration (3 mM) and a more compact, nuclease-resistant organization at a higher concentration (15 mM). The majority of the U1 RNA in the reconstituted particle did not contain hypermethylated caps, pseudouridine, or ribose 2'-O-methylation, showing that these enigmatic posttranscriptional modifications are not essential for reconstitution of the U1 snRNP particle. The extreme 3' end (18 nucleotides) of U1 RNA was required for reconstitution, but loop II (nucleotides 64 to 77) was not. (ABSTRACT TRUNCATED AT 250 WORDS)

L14 ANSWER 22 OF 22 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1980:170746 BIOSIS
DOCUMENT NUMBER: BA69:45742
TITLE: CHARACTERIZATION OF BRAIN RIBO NUCLEO PROTEIN PARTICLES.
AUTHOR(S): MAHONY J B; BROWN I R
CORPORATE SOURCE: DEP. BIOL., SCARBOROUGH COLL., UNIV. TORONTO, W. HILL, TORONTO, ONT. M1C 1A4, CAN.
SOURCE: J NEUROCHEM, (1979) 32 (5), 1019-1030.
CODEN: JONRA9. ISSN: 0022-3042.
FILE SEGMENT: BA; OLD
LANGUAGE: English

AB Brain **RNP** [ribonucleoprotein] particles were characterized to determine whether they play a role in the regulation of brain protein synthesis. **RNP** particles were isolated from the postribosomal supernatant of cerebral hemispheres of young rabbits, employing conditions which minimize adventitious protein-RNA interactions. Brain **RNP** particles consist of a different set of proteins compared to proteins associated with either 40 and 60S ribosomal subunits or polysomal mRNA. Poly(A+)mRNA from brain **RNP** particles stimulates the incorporation of [35S]methionine in a wheat embryo cell-free system and codes for a different set of proteins compared to poly(A+)mRNA isolated from polysomes (with some overlap; i.e., mRNA coding for brain-specific **S100** protein is present in both **RNP** particles and polysomes). Addition of total brain **RNP** particles to a cell-free wheat embryo system inhibits the endogenous incorporation of [35S]methionine. Total **RNP** particles were fractionated by sucrose density gradient centrifugation into a 'light' and a 'heavy' fraction. The light **RNP** fraction inhibited while the heavy **RNP** fraction stimulated protein synthesis in the wheat embryo cell-free system. Analysis of the protein composition of fractionated **RNP** particles revealed that the light and heavy **RNP** particles contained different sets of proteins. Together these results

suggested that 1 class of brain RNP particles may contain a translational inhibitor and may be involved in the regulation of protein synthesis in the brain.